

V. REMARKS

The drawings are objected to under 37 CFR 1.83 (a) because the drawings allegedly fail to show every feature of the invention specified in the claims, specifically claim 10. Claim 10 has been amended to more particularly point out the "rib" features. The rib feature is illustrated in Figure 1 in that a plurality of ribs 16 extend longitudinally between and are connected to one of the ring members 13 (of ring members 12 and 13) and the flange portion 15. As a result, Applicant does not believe a Replacement Sheet of Drawing Figure is necessary and the specification and the current drawing figures clearly describe the features recited in claim 10. Withdrawal of the objection is respectfully requested.

Claims 6 and 7 are rejected under 35 U.S.C. 102(b) as anticipated by Minkus et al. (U.S. Patent No. 5,460,617). Claim 8 is rejected under 35 U.S.C. 103(a) as unpatentable over Minkus). Claims 6-10 are rejected under 35 U.S.C. 103(a) as unpatentable over Hirschman et al. (U.S. Patent No. 6,042,565) and further in view of Ljungquist (U.S. Patent No. 6,331,173). The rejections are respectfully traversed.

In summary claim 6 is amended by adding the features of claims 8 and 9, now canceled.

Regarding Minkus:

It is an object of the present invention to easily mount the gasket 25 when it is mounted at the tip of the plunger 1 by screw connection in a state in which the center axis of the syringe barrel 20 and the center axis of the plunger 1 surely coincide with each other. In the present invention, this object is achieved by forming a configuration in which the ring members 12, 13 and 17 and vane members 14 are provided at the plunger 1, thus allowing the gasket 25 to move in the syringe barrel smoothly so as to prevent fluid leakage from a part between the inner surface of the syringe barrel and the outer circumferential surface of the gasket. Further, the configuration including the ring members 12, 13 and 17 and

vane members 14 also provides an advantage that a dimensional shrink can be prevented during molding to result in an accurate size.

In contrast, for the plunger 12 described in Minkus, its object is to allow a user with small hands to use with ease as described in "FIELD OF THE INVENTION" page 1 in the Description, which is different from the object of the present invention. Further, the plunger 12 in Minkus has a configuration having a pushing portion 48 provided at the midpoint in the plunger 12 in order to achieve the object, and therefore the configuration and effect are clearly different from the plunger 1 of the present invention which is configured to be gripped by the ring member 17.

Moreover, it is obvious that even if the plunger 12 of Minkus is used to try to make the center axis of the syringe barrel 10 surely coincide with the center axis of the plunger 12 when the gasket 26 is attached to the tip of the plunger 12, the center axes cannot surely coincide with each other. This is because as shown in FIG. 1, the plunger 12 of Minkus has nothing different from any conventionally known plunger, in which only the ring member 34 is completely positioned in the syringe barrel 10 when the gasket 26 is attached, the rib members 42 and 44 are partially positioned in the syringe barrel 10, and additionally the ring member 48 is positioned outside the syringe barrel 10. In other words, the cited reference of Minkus has no description nor teaching about the object, the configuration and the effects of the present invention.

Regarding Hirschman and Ljungquist:

The Office Action points out that the present invention is obvious from the combination of the cited reference of Hirschman and the cited reference of Ljungquist, but description and teaching about the alignment of the centers when the gasket 26 is screw-connected to the tip of the plunger 12, which is the characteristic of the present invention, cannot be found at all in the cited reference of Hirschman nor in the cited reference of Ljungquist.

More specifically, the plunger 100 of the Hirschman has a configuration in which the gasket 35 is designed to seat in the channel provided in a

circumferential direction at the tip of the plunger 100 as described at line 12 through line 16 in page 4 in the Description, and the cited reference of Hirschman has no disclosure of screw connection of the gasket 26 to the tip of the plunger 12, as stated by the Office Action.

Besides, the cited reference of the Ljungquist only describes the configuration in which the thread of the screw actuator 4 engages with the thread of the holder means 6 to be fixed, being movable back and forth, to the ample 23 (corresponding to the syringe barrel of the present invention). In other words, the relationship between the seal 35 corresponding to the gasket in the present invention and the screw actuator 4 corresponding to the plunger in the present invention is only described in Claim 1 as "engageable," and there is no description about screw connection. In addition, a member with no explanation is illustrated at a position on the upper side of the seal 35 in FIGS. 5 and 6, and the relationship between this member, the seal 35 and the screw actuator 4 is not clear. Accordingly, the cited reference of Ljungquist has neither description nor teaching about the configuration in which the gasket 26 is screw-connected to the tip of the plunger 12.

Accordingly, it is impossible to teach the object, the configuration and the effects relating to the alignment of the centers when the gasket 26 is screw-connected to the tip of the plunger 12, which is the characteristic of the present invention, even if the cited reference of Hirschman and the cited reference of Ljungquist are combined in any way.

Further, even if there is description or teaching about the screw connection of the gasket 26 to the plunger 12 in the cited reference of Ljungquist or another cited reference, it is inappropriate to combine it with the cited reference of Hirschman for the following reasons. The plunger 100 described in Hirschman is adapted to the automatic injector 200 which is not intended to rotate the plunger 100 with respect to the syringe barrel 20 at all but is directed to prevention of rotation of the plunger 100. This is clear from the description at line 54 through line 67 in page 6 in the Description of Hirschman, in which the plunger 100 and the syringe barrel 20 are preferably rotated as a unit in a circumferential

direction. In contrast, if the gasket 26 is screw-connected to the plunger 12, the screw connection is realized by rotating the plunger 100 with respect to the gasket 26 fixed to the syringe barrel 20 as illustrated in the present invention. As described above, the plunger 100 of Hirschman and the configuration in which the gasket 26 and the plunger 12 are screw-connected as in the present invention are contrary to each other. Therefore, there is no motivation to combine them.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggest the features of the claims as amended and discussed above. Thus, one of ordinary skill in the art would not be motivated to combine the features of the applied art because such combination would not result in the claimed invention nor are all of the features of the claimed invention taught in any single reference. As a result, it is respectfully submitted that the pending claims are allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Further, Applicants assert that there are also reasons other than those set forth above why the pending claims are patentable. Applicants hereby reserve the right to submit those other reasons and to argue for the patentability of claims not explicitly addressed herein in future papers.

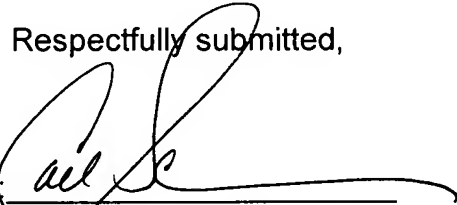
In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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